

1044b UIC - EAST POPLAR OIL FIELD
ENFORCEMENT CASE SDWA 1431
Folder ID: 13658 1961 Privileged

Release in Full



Region 8



13658

HISTORY



PRODUCTION DEPT.
FILE COPY

EAST POPLAR UNIT WELL NO. 11

ROOSEVELT COUNTY, MONTANA

MURPHY CORPORATION--OPERATOR

General Lib. Copy

Note: Heath shown sample description at 4875-915'

EAST POPLAR UNIT WELL NO. 14

ROOSEVELT COUNTY, MONTANA

MURPHY CORPORATION--OPERATOR

HISTORY-----	Page 1
COMPLETION DATA-----	Page 2
ELECTRO LOG DATA-----	Page 3
DRILL STEM TEST RECORD-----	Page 4
CORE ANALYSIS REPORT-----	Page 5
CORE DESCRIPTION-----	Page 6
MUD PROGRAM SUMMARY-----	Page 7
DRILLING BIT & TOTCO RECORDS & DIAMOND CORE BIT RECORDS-----	Page 8
SAMPLE DESCRIPTION-----	Page 9

W E L L H I S T O R Y

WELL NO.: East Poplar Unit Well No. 14

LOCATION: C SE SE Section 3, Township 28 North, Range 51 East

ELEVATION: 2039' Ground - 2100' K.B.

CONTRACTOR: Pioneer Drilling Company

SPUDDED: 2:00 A.M., May 18, 1955

COMPLETED: 10:00 P.M., June 9, 1955

TOTAL DEPTH: 5328' Driller equals 5833' Schlumberger

CASING: 13-3/8" @ 40.00' with 50 sacks cement
9-5/8" @ 933.48' with 400 sacks cement
5-1/2" @ 5832.00' with 300 sacks cement

TUBING: 2-3/8" @ 5632.76'

PERFORATIONS: "B-2" Zone - 5657'-5665'

PACKER: None

ACID TREATMENT: "B-2" Zone - 1700 gallons etching acid
500 gallons gel

INITIAL POTENTIAL: 162 BOPD, 133 BEPD, 45% water cut

TYPE COMPLETION: Single producer from the "B-2" Zone

SUPPLEMENT TO WELL HISTORY

EAST POPLAR UNIT 14

10-24-90 A CIBP was set at 4870'.

11-07-90 Well was pressured to 510# held 30 minutes.

AUTHORITY FOR EXPENDITURE
MURPHY CORPORATION - EAST POPLAR UNIT NO. 14
SE SE Section 3, T28N, R51E, Roosevelt County, Montana

WELL DRILLING & CONSTRUCTION EXPENSE:	TO CSG. PT.	COMP. & EQUIP.	TOTAL COST
Drilling - Footage - 5825' @ \$5.25/ft.	\$ 30,580		\$ 30,580
Daywork - 2 days @ \$850/day & 2 days @ \$775/day	1,700		1,700
Loc. survey, permit & prep.	200	\$ 1,550	1,550
Roads, fences, cattleguard, etc.	200		200
Mud mat. & chem., incl. oil & gas	4,000		4,000
Drilling bits, baskets, etc.		250	250
Cementing casing	1,600	950	2,550
Coring materials & services	500		500
Testing services incl. swabbing		150	150
Other logs, surveys & analysis	1,200		1,200
Perforating services		600	600
Hydfrac, acidize, etc. incl. oil		2,200	2,200
Float equip., centralizers, etc.	250	650	900
Trucking, welding & other labor	500	500	1,000
Supervision & Miscellaneous	200	200	400
Total Est. Well Drilg. & Const. Exp.	\$ 40,930	\$ 7,050	\$ 47,980

WELL EQUIPMENT COSTS:			
Casing: 1090' of 9-5/8" O.D.	\$ 3,500		\$ 3,500
Casing: 5900' of 5-1/2" O.D.		\$ 9,270	9,270
Tubing: 5900' of 2-7/8" O.D.		4,590	4,590
Casing head & connections	300		300
Kmas tree & connections		1,300	1,300
Total Est. Well Equip. Costs	\$ 3,800	\$ 15,160	\$ 18,960
Total Est. Cost of Well	\$ 44,730	\$ 22,210	\$ 66,940

LEASE EQUIPMENT:			
Flow lines		\$ 2,200	\$ 2,200
Other line pipe, valves & fittings		500	500
Trucking, welding & other labor		2,000	2,000
Total Est. Cost of Lease Equip.		\$ 4,700	\$ 4,700
TOTAL EST. COST OF WELL & LEASE EQUIP.	\$ 44,730	\$ 26,910	\$ 71,640

APPORTIONMENT OF TOTAL ESTIMATED COSTS

	%			
Murphy Corporation -				
Unit Operator	31.448470	\$ 14,066	\$ 8,463	\$ 22,530
Munoco Company	2.096565	938	564	1,502
Placid Oil Company	33.545035	15,005	9,027	24,032
The Carter Oil Company	16.335860	7,307	4,396	11,703
Phillips Petroleum Company	16.335860	7,307	4,396	11,703
C. F. Lundgren	.238210	107	64	171

APPROVAL OF EXPENDITURE

Production Department

Requested by Harold Milam
Date 5-5-55
Approved by Gordon Luby
Date 5-5-55

Approved

Budget Section
By Harold Luby
Date 5-18-55

Executive Department

Approved by W. J. Harwood
Date May 16, 1955

Approved

Paul C. McDonald 5-19-55

EXPLORATION PROSPECTUS FOR East Poplar Unit 14
Lease Name Well No.

LOCATION SE SE Section 3-T28N-R51E FIELD EAST POPLAR

COUNTY Roosevelt STATE Montana

ELEVATION 2110' K.B.(est.) OBJECTIVE FORMATION AND DEPTH Madison "C" Zone
5820'

EXPECTED STRATIGRAPHIC SECTION AND ESTIMATED DEPTHS

Judith River-----	785 (+1345)	Spearfish-----	4610 (-2500)
Eagle-----	1156 (+ 954)	Amsden-----	4724 (-2614)
Niobrara-----	2152 (- 42)	Heath-----	4836 (-2726)
Greenhorn-----	2350 (- 240)	Otter-----	5005 (-2895)
Muddy-----	2907 (- 797)	Kibbey Sand-----	5134 (-3024)
Dakota Silt-----	3116 (-1008)	Kibbey Lime-----	5300 (-3190)
Morrison-----	3490 (-1380)	Madison-----	5390 (-3280)
Swift-----	3570 (-1460)	"A" Zone-----	5505 (-3395)
Rierdon-----	3913 (-1803)	"B-1" Zone-----	5645 (-3535)
Piper Shale-----	4275 (-2185)	"B-2" Zone-----	5663 (-3553)
Piper Lime-----	4350 (-2240)	"C" Intercrystalline-----	5798 (-3688)
Gypsum Springs-----	4406 (-2296)		

RECOMMENDED CORING PROGRAM

Circulate Heath Sand. Do not core. ✓

RECOMMENDED TESTING PROGRAM.

RECOMMENDED LOGGING SERVICE

A. ELECTRIC LOG: (1) Surface (2) Correlation (3) Total Depth X
B. MICRO LOG: (1) Surface (2) Correlation (3) Total Depth X
C. GAMMA RAY: D. LATERO LOG: E. LIMESTONE:
F. OTHER: VELOCITY SURVEY MUD TRUCK

GENERAL INFORMATION (SURFACE AND NEAR SURFACE SEDIMENTS, DRILLING WATER, CULTURE, ACCESSIBILITY, NEARBY WELL CONTROL, ETC.)

Nearest subsurface well control: E.P.U. # 5 SW SW Section 2-T28N-R51E.
E.P.U. #12 SW SE Section 8-T28N-R51E.

TUBULAR PROGRAM:

1000' of 9-5/8" O.D.
5900' of 5-1/2" O.D.

REMARKS

BILLINGS DIVISION

DATE 5-5-55

BY Bill Lane

App'd. By <u>MB</u>
Date: <u>5-5-55</u>

DRILLING PROSPECTUS FOR East Poplar Unit 14
Lease Name Well No.
LOCATION SE SE Section 3-T28N-R51E FIELD East Poplar
COUNTY Roosevelt STATE Montana

SURFACE HOLE

SIZE: 12-1/4"
MUD: Natural and Bariod
CASING: 9-5/8" O.D.
CEMENT: 400 sacks regular 2% CaCl₂
SETTING TIME: 24 hours

BELOW SURFACE

HOLE SIZE: 8-3/4"
CORE HOLE SIZE: 7-7/8"
TEST TOOLS: No tests
TESTING TIME: -----
SHUT IN TIME: -----
CASING: 5-1/2" O.D. 15.50# J-55
CEMENT: 300 sacks Slo-set 2% gel

MUD PROGRAM

TYPE: Natural and chemical to 4000'
Caustic and quebracho 4000' to T.D.
MUD WEIGHT: 10.4 to 10.6
WATER LOSS: 15 cc or less
PH: 12
VISCOSITY: 40

NOTES:

40' of 13-3/8" was set with a dry hole digger in 1952.
Completion will be made in the "B-1" and "B-2" Zones
using conventional methods. Will stratafrac if necessary.

BILLINGS DIVISION

DATE 5-5-55

BY Howard Milam

File # 14

M. L. James

A.F.E. No. 55-154

AUTHORITY FOR EXPENDITURE
EAST POPLAR UNIT NO. 14 (Installation of Pumping Unit)
SE SE Section 3, T28N-R51E, Roosevelt County, Montana

Pumping Unit, complete with engine	\$ 8,200
Labor and materials, setting unit	750
Trucking, small fittings & incidentals	150
Total Estimated Cost	\$ 9,100

APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Corporation--	%	
Unit Operator	31.448470	\$ 2,862
Munoco Company	2.096565	191
Placid Oil Company	33.515035	3,053
The Carter Oil Company	16.335860	1,487
Phillips Petroleum Company	16.335860	1,487
C. F. Lundgren	.238210	22

APPROVAL OF EXPENDITURE

Requested by:

Recommend Approval:

HM Milan 6-10-55
Division Production Supt. date

General Production Supt. date

Recommend Approval:

Recommend Approval:

Golden Rusty 6-10-55
Division Manager date

Budget Supervisor date

Approved:

Vice President-Operations date

HM/ms
6-10-55

AUTHORITY FOR EXPENDITURE
MURPHY CORPORATION - EAST POPLAR UNIT NO. 14
SE SE Section 3, T28N, R51E, Roosevelt County, Montana

(Workover No. 1)

Pulling Unit 7 (12 hrs.) days @ \$336 per day	\$2,350
Run G&N Log	825
Squeeze B-2 Zone w/50 sks. Latex Cement	1,075
Retrievable Bridge Plug and Packer	575
Two Perforating Jobs (B-2 & 1)	1,000
Two 500 gals. Acid Jobs (B-2 & 1)	1,450
Dia-Log 2 1/2" Tbg.	400
Change Cut 1675' of 2 3/8 to 2 7/8" Class 2 @ \$0.65 per ft.	1,075
Misc. Trucking, Material and Labor	400
Less Credit on 1675' of 2 3/8" Tbg. @ \$0.35 per ft.	(575)

Total Estimated Cost \$8,575

Present Status: Pumping 256 BFPD, 90% water (26 BO 230 BW) from B-2 Zone.

Justification for Expenditure: To increase production, test Latex cement for water shut off and attempt to determine the water cut's of the B-1 & 2 Zones individually.

Proposed Workover: Run Dia-Log through 2 1/2" tbg, run G&N Log, squeeze B-2 Zone perforation 5657-65' w/50 sks. Latex cement through retrievable pecker, drill out, and reperforate the B-2 Zone w/jet notch gun 5658' and 5661'. Acidize w/500 gals. retarded acid and swab test. If fluid volume is not too high to handle, perforate the B-1 Zone 5640' and 5643' w/jet notch gun. If the B-1 & 2 Zones are not communicated, acidize the B-1 Zone w/500 gals. retarded acid, swab test and produce B-1 & 2 co-mingled.

APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Corporation	31.448470%	\$2,697
Munoco Company	2.096565%	180
Placid Oil Company	33.545035%	2,876
Humble Oil & Refining Co.	16.335860%	1,401
Drilling Specialties Co.	16.335860%	1,401
C. F. Lundgren	.238210%	20

APPROVAL OF EXPENDITURE

Requested by: *M. J. Lundgren* 5-11-61
 Field Production Superintendent Date

RECOMMEND APPROVAL:

RECOMMEND APPROVAL:

Division Production Supt.

Date

Staff Production Man

Date

RECOMMEND APPROVAL:

RECOMMEND APPROVAL:

Division Manager

Date

Budget Supervisor

Date

APPROVED:

Vice President - Operations

Date

all approvals received as of 6-23-61

Original Signed By Paul C. McDonald 11-8-6~

CCD will talk to
you about this
before start -

MURPHY OIL CORPORATION - EAST POPLAR UNIT NO. 14

24

No.

100

Workover No. 2 Treated the B-1 Zone w/Visco B-3-S Acid. Unsuccessful.

PRESENT STATUS: Pumping from the 8-1 Zone, perforations 5640 to 43'. December 9, 1964 well test - pumping at the rate of 251 BFPD 97% water, 8 BOPD, 243 BFPD - Uneconomical.

PROPOSAL: To Test the Heath Sand Run Cement Bond Log, set C.I. Bridge Plug w/1 sks cm. on top on W.L. at 5550' (above salt section). Perforated the 2nd stringer of the Heath Sand 4945' to 4950' 2 holes per ft.. Swab test and Sand Frac if needed to increase fluid. If the 2nd stringer of the Heath Sand is uneconomical squeeze w/Latex Cmt. and Sand Patch the first stringer of the Heath Sand 4894' and 4896'. Swab test and Sand Frac if needed to increase fluid. All measurement G&N Log and assuming that the cement is bonded through the Heath Sand.

Abstract

\$1800
1600
500
2700
500

\$7100

—

1200
1300
3900
400

7.300

2a

$$\begin{array}{r} 3100 \\ 1500 \\ \hline 4,600 \\ \$19,000 \end{array}$$
48
46

\$ 5,975
398
6,374
3,104
3,104
45

2.

Recommend Approval:

Date _____

Date _____

appended
CJA 1-26-66

AUTHORITY FOR EXPENDITUREMURPHY OIL CORPORATION - EAST POPLAR UNIT NO. 14SE SE Section 3, T28N, R51E, Roosevelt County, Montana

(Workover No. 5)

Workover No. 4 Blanked off the B-1 Zone w/Bridge Plug (depleted). Perforated the Heath Sand 4945-50'. Swab tested at the rate of 164 BFPD, 100% Salt Water. Squeezed and reperforated the Heath Sand 4895-98'. Swab tested at the rate of 1st. hr. 150 BFPD 99% Salt Water, 5th hr. 109 BFPD 100% Salt Water.

PRESENT STATUS: Temporarily Abandoned.

PROPOSAL: To further test the Heath Sand and Amsden.

No. 1 Set C.I. Bridge Plug on W.L. at 4891'. Run tubing w/seating nipple and perforate the Heath Sand 4850-70' w/Through Tubing Magnet Jet Gun, 2 holes per ft. Run rods and pump test.

No. 2 If Uncommercial and fluid volume is not to high (100-150 BPD) pull rods, perforate the Heath Sand 4884-90', 2 holes per ft., run rods and pump test

No. 3 If uncommercial, pull rods and tubing. Run and set C.I. Bridge Plug on W.L. at 4850' w/1 sk. cmt. on top of plug. Run tubing, perforate the Amsden at 4758-70', 2 holes per ft. Run rods and pump test. If unsuccessful lay down rods, load hole with Salt Water, lay down tubing, set Bridge Plug on W.L. at 4740' w/1 sk. cmt. on top and abandon.

ESTIMATED COST

Pulling Unit 84 hrs. @ \$31.00 per hr.	\$ 2,600
Bridge Plugs (3) set on W.L.	\$ 1,300
Perforate (3 jobs)	\$ 1,200
One Sand Frac Job	\$ 2,700
Misc. labor, trucking and material	500
Total Estimated Cost	\$ 8,300
Estimated Cost of Producing Facilities	\$ 4,600
O & G Separator, P.D. Meter, Est.	
GRAND TOTAL SUCCESSFUL COMPLETION	\$12,900

APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Oil Corporation	31.448470%	\$ 4,057
Munoco Company	2.096565%	\$ 270
Placid Oil Company	33.545035%	\$ 4,327
Humble Oil and Refining Company	16.335860%	\$ 2,108
Phillips Petroleum Company	16.335860%	\$ 2,108
C. F. Lundgren	.238210%	30

APPROVAL OF EXPENDITURE

Requested by:

Recommend Approval:

M. T. James
 M. T. James

5-25-65
 Date

W. J. Thornton
 Date

Date

L. L. Duncan
 L. L. Duncan

Date

APPROVED:

AUTHORITY FOR EXPENDITURE
MURPHY OIL CORPORATION - EAST POPLAR UNIT NO. 14
C SE SE Section 3, T28N, R51E, Roosevelt County, Montana

PRESENT STATUS: Temporarily abandoned March 4, 1965.

HISTORY: Completed June 9, 1955 from the B-2 Zone. Depleted and watered out.

Workover No. 1: August, 1961. Squeezed the B-2 and recompleted in the B-1 Zone.

Workover No. 2: August, 1962 Acidized Unsuccessful.

Workover No. 3: November, 1962 Reacidized the B-1 Zone Unsuccessful

Workover No. 4: February, 1965 Shut the B-1 Zone in with Bridge Plug. Ran Cement Bond Log (good bond through Heath Sand). Perforated the Heath Sand 4945-50'. Swab tested 164 BFPD 100% Water. Latex Cement squeezed. Perforated the Heath Sand 4995-98'. Swab tested 109 BFPD 100% Water.

Structurally Heath Porosity

East Poplar Unit No. 14

- 2774'

East Poplar Unit No. 15

- 2786'

PROPOSAL: Set C.I. Bridge Plug at 4993'. Top squeeze the Heath Sand perforations 4895-98' with 50 sacks Latex. Perforate the Heath Sand 4877-4892.5' 1 hole per foot with 50 gram jets. Swab test. Acidize with 500 gallons 15% (if needed). Sand Frac with 8,000# sand and 4,000# beads and 50 gallons Gyp Sol. (Expected production 100 BO and 200 BW Pay out 5 Months.)

ESTIMATED COST

Pulling Unit, 60 Hrs. at \$36.00 per hr.	\$ 2,175.00
4900' of 2-7/8" Class No. 1 Tubing at \$1.04 per ft. (Stock)	\$ 5,160.00
Set Cement Retainer on W.L., Perforate	\$ 1,000.00
Block Squeeze with 500 sacks Latex Cement	\$ 1,250.00
500 Gallon Acid and Sand Frac	\$ 5,875.00
4800' 7/8" and 3/4" Class No. 2 Rods and Pump at \$0.36 (Stock)	\$ 1,725.00
160 Peak Torque Pumping Unit, Motor and Controls (Stock)	\$ 2,700.00
Metering Separator (from Sletvold No. 2 - Not in use)	\$ 4,500.00
Misc. Labor, Trucking and Material	\$ 1,500.00
TOTAL ESTIMATED COST	\$25,025.00

APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Oil Corporation	31.448470%	\$ 7,870.00
Placid Oil Company	33.545035%	\$ 8,395.00
Humble Oil and Refining Company	16.335860%	\$ 4,088.00
Phillips Petroleum Company	16.335860%	\$ 4,088.00
Minoco Company	2.096565%	\$ 525.00
C. F. Lundgren	.238210%	\$ 59.00

APPROVAL OF EXPENDITURE

Requested by:

APPROVED:

M. T. Jensen
M. T. Jensen

6-10-69
Date

W. J. Thornton
Date

WJS/sb
June 10, 1969

AUTHORITY FOR EXPENDITURE
MURPHY OIL CORPORATION - EAST POPLAR UNIT NO. 14
C SE SE Section 3, T28N, R51E, Roosevelt County, Montana

PRESENT STATUS: Temporarily abandoned March 4, 1965.

HISTORY: Completed June 9, 1955 from the B-2 Zone. Depleted and watered out.

Workover No. 1: August, 1961 Squeezed the B-2 and recompleted in the B-1 Zone.

Workover No. 2: August, 1962 Acidized Unsuccessful. 13-1

Workover No. 3: November, 1962 Reacidized the B-1 Zone Unsuccessful.

Workover No. 4: February, 1965 Shut the B-1 Zone in with Bridge Plug.. Ran Cement Bond Log (good bond through Heath Sand). Perforated the Heath Sand 4945-50'. Swab tested 164 BFPD 100% Water. Latex Cement squeezed. Perforated the Heath Sand 4895-98'. Swab tested 109 BFPD 100% Water.

Structurally Heath Porosity

East Poplar Unit No. 14

-2774'

East Poplar Unit No. 15

-2786'

PROPOSAL: Set C.I. Bridge Plug at 4893' top. Squeeze the Heath Sand perforations 4895-4898' with 50 sacks Latex. Perforate the Heath Sand 4877-4892.5', 1 hole per foot with 50 gram jets. Swab test. Acidize with 500 gallons 15% (if needed). Sand Frac with 8,000# sand and 4,000# beads and 50 gallons G₂ Ban. (Expected production 50 BO and 50 BW Pay out 10 months.)

ESTIMATED COST

Pulling Unit, 60 Hrs. at \$36.00 per hr.	\$ 2,175
4900' of 2-7/8" Class No. 1 Tubing at \$1.04 per ft. (Stock)	\$ 5,100
Set Cement Retainer on W.L., Perforate	\$ 1,000
Block Squeeze with 500 sacks Latex Cement	\$ 1,250
500 Gallon Acid and Sand Frac	\$ 5,075
4800' of 7/8" and 3/4" Class No. 2 Rods and Pump at \$0.36 per ft. (Stock)	\$ 1,725
160 Peak Torque Pumping Unit, Motor and Controls (Stock)	
Tank Battery, 1 extra tank at "F" Battery - Move 1 tank from "J" Battery	
Purchase new Heater Treater	\$ 4,500
Misc. Labor, Trucking and Material	\$ 1,500
TOTAL ESTIMATED COST	\$22,325

APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Oil Corporation	31.448470%	\$ 7,021
Placid Oil Company	33.545035%	\$ 7,489
Humble Oil and Refining Company	16.335860%	\$ 3,647
Phillips Petroleum Company	16.335860%	\$ 3,647
Munoco Company	2.096565%	\$ 468
C. F. Lundgren	.238210%	\$ 53

APPROVAL OF EXPENDITURE

Requested by:

APPROVED:

M. T. Jones

11-7-68
Date

W. J. Thornton

Date

MTJ/sb
November 7, 1969

PERMIT
APPLICATIONS

GENERAL RULES

201, 202, 213,
216, 219, 233.1

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE!

THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION

MAY 12 1955

SUNDRY NOTICES AND REPORT OF WELLS

OIL AND GAS CONSERVATION COMMISSION

Notice of Intention to Drill	<input checked="" type="checkbox"/>	Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	MAY 14 1955
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

May 5, 1955

Following is a { notice of intention to do work } on land { owned } described as follows:
report of work done { leased }

LEASE E.P.U. (BLM-A-012244)

MONTANA
(State)Roosevelt
(County)East Poplar
(Field)Well No. 14 C SE SE Section 3 28N 51E M.P.M.
(m. sec.) (Township) (Range) (Meridian)

The well is located 660 ft. { N. } of South line and 660 ft. { W. } of East line of Sec. 3

The elevation of the derrick floor above the sea level is not yet determined

READ CAREFULLY

DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing).

DETAILS OF WORK
RESULT

Will set approximately 1000 feet of 9-5/8" surface pipe with 400 sacks of cement. Total depth is expected to be 6000 feet so as to evaluate the producing section of the Madison formation. 5-1/2" 15.50# casing will be set for production string. Adequate blow out preventers will be installed.

AMOUNT RECEIVED \$75.00
DRILLING PERMIT FEE 5.427
RECEIPT NO. 881

APPROVED USGS 5-13-55

A CHECK IN THE AMOUNT OF \$75.00
ATTACHED FOR DRILLING PERMIT FEE

Approved 5-17-55
(Date)
Mark P. Stutney
Title

District Office Agent

Company MURPHY CORPORATION
By Harold Milan
Harold Milan
Title Division Production Superintendent
Address B-13 Behner Bldg. Billings, Mont.

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Triplicate.

201, 202, 213,
216, 219, 233.

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE!

THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

SUNDRY NOTICES AND REPORT OF

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

May 23, 1955

. 19

Following is a { notice of intention to do work } on land { owned } described as follows:
 { report of work done } { leased }

LEASE E.P.U. (BIM-A-012244)

MONTANA
(State)

Roosevelt.
(County)

East Poplar
(Field)

Well No.	14	SE SE Section 3	28N	51E	M.P.M.
		(m. sec.)	(Township)	(Range	Meridian)

The well is located 660 ft. ~~xx~~ N. of South line and 660 ft. ~~xx~~ W. of East line of Sec. 3

The elevation of the derrick floor above the sea level is..... 2088-Gr.

READ CAREFULLY

DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing).

DETAILS OF WORK RESULT

Spudded at 2:00 A.M. 5-18-55. Ran 32 jts. 983.48' of 9-5/8", J-55, 36#, R-2, 8rd. thd. Standard C American casing. Landed 10' below RKB, Howco shoe at 993.48'. Cemented with 400 sacks regular cement with 2% CaCl₂. Circulated 100 sacks cement. Bumped plug with 1000#. Float held OK. Plug down at 8:15 P.M., 5-20-55.

APPROVED USCS 5-31-55

APPROVED SUBJECT TO CONDITIONS SHOWN ON REVERSE.

Approved.

.....
(Date)

Company.....MURPHY CORPORATION

By _____

Harold Milam

Title

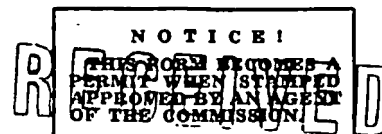
Title Division Production Superintendent

Address B-13 Behmer Bldg., Billings, Mont.

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Triplicate.

(SUL IN QUADRUPLICATE)
TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY



MAY 9 1961

SUNDRY NOTICES AND REPORT OF WELLS OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	XX	Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

April 27 1961 MAY 5 - 1961 19 61

Following is a { notice of intention to do work } on land { ~~owned~~ leased } described as follows:

LEASE E.P.U. (BLM-A-029305-A)

MONTANA (State) Roosevelt (County) East Poplar (Field)

Well No. 14 SE SE Section 3 28N 51E M.P.M.
(m. sec.) (Township) (Range) (Meridian)

The well is located 660 ft. from { ~~XX~~ S } line and 660 ft. from { E ~~XX~~ } line of Sec. 3

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

The elevation of the derrick floor above the sea level is 2088' Gr.

READ CAREFULLY

DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

Run Dia-Log through 2 1/2" tbg., run G&N Log, set cement retainer on W.L. at 5652' (Microlog), squeeze w/50 sks. Latex cement, perforate the B Zone (5639-44') (5') w/Lane Wells "E" gun, acidize w/1000 gals. retarded acid through retrievable packer and swab test.

Present Status: Pumping 237 BFPD, 91% water, (21 BOPD 216 BWPD) from B Zone. Perforations 5657-65'.

Approved subject to conditions on reverse of form

Date 5-8-61

By [Signature] Title

District Office Agent

Company MURPHY CORPORATION

By [Signature]

Title Field Production Superintendent

Address P. O. Box 547, Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

OVER

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE:
THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

JUN 28 1961

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans	X	Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off	X	Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	X	Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

June 23.

19 61

Following is a { notice of intention to do work } on land { ~~owned~~ } described as follows:
 { report of work done } { leased }

LEASE BLM-A-029305-A

..MONTANA
(State)

Roosevelt
(County)

East Poplar Unit
(Field)

Well No. 14 SE SE Section 3 28N 51E
(m. sec.) (Township) (Range) (Meridian)

The well is located.....660.....ft. from { ~~XX~~
S } line and.....660.....ft. from { E
~~XX~~ }line of Sec. 3.....

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

The elevation of the derrick floor above the sea level is.....2088' Gr.

READ CAREFULLY

DETAILS OF PLAN OF WORK

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK RESULT

To supersede our Notice of Intention of April 27, 1961.

Run Dia-Log through 2½" tbg., run G&N Log, squeeze B Zone perforation 5657-65' w/50 sks Latex cement through retrievable packer, drill out and reperforate 5658-61' w/jet notch gun. Acidize w/500 gals retarded acid and swab test. If fluid volume is not too high to handle, perforate B Zone 5640-43' w/jet notch gun. If perforations 5640-43' and 5657-65' are not communicated, acidize 5640-43' w/500 gals retarded acid, swab test and produce B Zone perforations 5640-43' and 5657-65', co-mingled.

Approved subject to conditions on reverse of form

Date JUN 27 1961

Date _____
By SM Wathan, Petr Enger Title _____

District Office Agent

Company.....**MURPHY CORPORATION**

By M. J. Carrels

Title Field Production Superintendent

Address P. O. Box 547, Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

- 2-28-65 Perforated with Schlumberger through Tubing Magnet Gun 4945' to 4950',
2 holes per foot.
- 3-1-65 No pressure on tubing. Ran swab. Swabbed tubing to 4918' (top of Model
"R" Packer). Swabbed 8 hours. Swab test as follows:

1st hr.	Rate of 136 BFPD	100% Salt Water
2nd hr.	Rate of 164 BFPD	100% Salt Water
3rd hr.	Rate of 192 BFPD	100% Salt Water
4th hr.	Rate of 164 BFPD	100% Salt Water
5th hr.	Rate of 164 BFPD	100% Salt Water
6th hr.	Rate of 164 BFPD	100% Salt Water
7th hr.	Rate of 164 BFPD	100% Salt Water
8th hr.	Rate of 164 BFPD	100% Salt Water

Chlorides 38,000 PPM

- 3-2-65 Squeezed the Heath Sand perforations 4945'-4950' w/50 sacks of Latex
Cement.
- 3-3-65 Perforated Heath Sand with Schlumberger through Tubing Magnet Gun 4894'-
4898', 2 holes per foot. Reset packer from 4780' to 4878'. Ran swab.
Swab test as follows:
- | | | | |
|---------|----------|----------------|----------------------|
| 1st hr. | 150 BFPD | 99% Water Cut | 1.5 BOPD, 148.5 BWPD |
| 2nd hr. | 137 BFPD | 99% Water Cut | 1 BOPD, 136 BWPD |
| 3rd hr. | 109 BFPD | 100% Water Cut | |
| 4th hr. | 109 BFPD | 100% Water Cut | |
| 5th hr. | 109 BFPD | 100% Water Cut | |
- Tubing filled overnight. Did not flow. No oil on top of fluid.
- 3-4-65 Temporarily Abandoned.

GENERAL RULES

201, 202, 213,
216, 219, 233.1

(SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

NOTICE!
THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

OCT 24 1961

SUNDRY NOTICES AND REPORT OF WELLS

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	XX
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

October 17, 1961

Following is a ~~notice of intention to do work~~ report of work done on land ~~leased~~ described as follows:

LEASE HLM-A-029305A

MONTANA
(State)Roosevelt
(County)East Poplar
(Field)

Well No. 14 SE SE Section 3 28N 51E
(m. sec.) (Township) (Range) (Meridian)

The well is located 660 ft. from { S } line and 660 ft. from { E } line of Sec. 3

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

The elevation of the derrick floor above the sea level is 2088 gr.

READ CAREFULLY

DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

See attached sheets

RECEIVED

OCT 18 1961

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGSApproved *10-19-61* subject to conditions on reverse of formDate *10-23-61*By *J. W. R. 168* Title

District Office Agent

Company MURPHY CORPORATION

By

Title Field Production Superintendent

Address Box 547, Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

(SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

SUNDRY NOTICES AND REPORT OF WELLS

NOTICE!
THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

DEC 10 1962

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	xx	Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

December 5, 1962.

Following is a { notice of intention to do work } on land { ~~owned~~ leased } described as follows:

LEASE BLM-A-029305A

MONTANA (State) Roosevelt (County) East Poplar (Field)

Well No. 14 SE SE Section 3 T28N R51E M.P.M. (m. sec.) (Township) (Range) (Meridian)

The well is located 660 ft. from { S } line and 660 ft. from { E } line of Sec. 3

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

The elevation of the derrick floor above the sea level is 2088 ft.

RECEIVED

READ CAREFULLY

DETAILS OF PLAN OF WORK

DEC 6 1962

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings, indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing, etc.)

DETAILS OF WORK
RESULT

To increase production. Displace into B-1 zone formation 1000 gal. lease crude w/100# adomite fluid loss additive added. Follow w/3000 gals. Dowell retarded acid w/150# of Dowell FLA - X2 (J-208 fluid loss additive) added to acid. Acidize through model "R" retrievable packer. Twin diesel pump truck for maximum injection rate. Swab spint acid and pump test.

Approved subject to conditions on reverse of form

Date 12-7-62

By J. L. City Title

District Office Agent

Company Murphy Corporation

By M. J. Farrell

Title Field Production Superintendent

Address Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

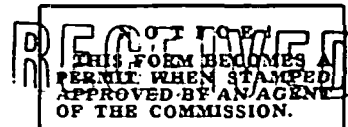
WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

GENERAL RULES

201, 202, 213,
216, 219, 233.1

(SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

SEP 23 1963

SUNDRY NOTICES AND REPORT OF WELLS

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	XXXXXX
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

September 17, 1963

Following is a ~~notice of intention to do work~~ report of work done on land ~~owned~~ leased described as follows:

LEASE A-029305A

MONTANA
(State)Roosevelt
(County)East Poplar Unit
(Field)Well No. 14 C SE SE Section 3 28N 51E MPM
(m. Sec.) (Township) (Range) (Meridian)The well is located 660 ft. from ~~S~~ line and 660 ft. from ~~E~~ line of Sec. 3

(Locate accurately on Plat on back of this form the well location, and show lease boundary.)

The elevation of the derrick floor above the sea level is 2088

RECEIVED

READ CAREFULLY

DETAILS OF PLAN OF WORK

SEP 20 1963 READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

Set Model "R" Packer at 5629'. Filled casing and test head, tubing and packer with 1500#. Held good. Acidized B Zone 5640-43' with 3000 gallons Dowell retarded acid with FLA X-2 J-208. Added mixed 1000 gals lease crude with 100# adomite added and pump ahead of acid. Pumped Adomite and oil at rate 3/4 BPM at 3500#. First 4 bbls. acid at rate of 1/2 BPM at 3500#. Formation broke, increased pump rate. Injected remainder of acid at rate of 4.5 BPM at 3200#. Bleed down press. 2200#. Let acid set 1 hour on form. Started swabbing. Swabbed 5 hours. Last hour at the rate of 22 BPH 95-98% salt water with slight acid taste. Ran rods and spaced 2-1/2" x 2" conv. pump at 5450'. Started pumping at 11:00 AM on 11-29-62. Pumping at the rate of 301 BFPD, 96% water, (12 BO, 289 BW).

Approved subject to conditions on reverse of form

Date Sept 20, 1963

By E M Watkins Title

District Office Agent

Company Murphy Corporation

By M. H. James Title Field Production Superintendent

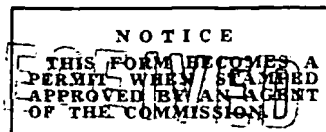
Address Box 547, Poplar, Montana 59255

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

(SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

MAR 5 1965

SUNDRY NOTICES AND REPORT OF WELLS

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	
Workover No. 4	XXX		

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

March 1, 1965

Following is a notice of intention to do work on land ~~XXXX~~ leased described as follows:

LEASE A-029305A

MONTANA
(State)Roosevelt
(County)East Poplar Unit
(Field)Well No. 14 C SE SE Section 3 28N 51E MPM
(m. sec.) (Township) (Range) (Meridian)

The well is located 660 ft. from XXX line and 660 ft. from E line of Sec. 3

LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION AND SHOW LEASE BOUNDARY

The elevation of the derrick floor above the sea level is 2088

READ CAREFULLY

DETAILS OF PLAN OF WORK

MAR 4 1965

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details, results Shooting, Acidizing, Fracturing)

DETAILS OF WORK
RESULTLatest Test: Pumping from the B-1 Zone, perforations 6540-6543'. December 9, 1964 well test - pumping at the rate of 251 BFPD 97% water, 8 BOPD, 243 BWPD - Uneconomical.Proposal: To Test the Heath Sand. Run Cement Bond Log, set C.I. Bridge Plug w/1 sk. cmt. on top on W.L. at 5550' (above salt section). Perforate the 2nd stringer of the Heath Sand 4945' to 4950', 2 holes per ft.. Swab test the Sand Frac if needed to increase fluid. If the 2nd stringer of the Heath Sand is uneconomical squeeze w/Latex Cmt. and Sand Notch the first stringer of the Heath Sand 4895' and 4896'. Swab test and Sand Frac if needed to increase fluid. All measurement G&N Log and assuming that the cement is bonded through the Heath Sand.

Approved subject to conditions on reverse of form

Date 3-4-65

By J. W. C. H. p. Title
District Office Agent

Company MURPHY OIL CORPORATION

By M. L. G. Smith

Title Field Production Superintendent

Address P.O. Box 547 Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TYPE
(Other instruct
verse side)ICATE*
on re-Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

BLM-A
X-923305A

OR IF APPLICABLE, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	U. S. GEOLOGICAL SURVEY RECEIVED MAR 4 1965 BILLINGS, MONTANA	7. UNIT AGREEMENT NAME East Poplar Unit
2. NAME OF OPERATOR MURPHY OIL CORPORATION		8. FARM OR LEASE NAME
3. ADDRESS OF OPERATOR P.O. Box 547 Poplar, Montana		9. WELL NO. EPU No. 14
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 660' from S line and 660' from E line		10. FIELD AND POOL, OR WILDCAT East Poplar
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 2088 Gr.	11. SEC., T., R., M., OR B.L. AND SURVEY OR AREA C SE 34 Section 3 T28N, R31E
		12. COUNTY OR PARISH Roosevelt
		13. STATE Montana

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

(Other) Workover No. 4 ☒

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled; give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Latest Test: Pumping from the B-1 Zone, perforations 6540-6543'. December 9, 1964
well test - pumping at the rate of 251 BFPD 97% water, 8 BOPD, 243 BWPD - Uneconomical.

Proposal: To Test the Heath Sand; Run Cement Bond Log, set C.I. Bridge Plug w/1 sk. cmt. on top on W.L. at 5550' (above salt section). Perforate the 2nd stringer of the Heath Sand 4945' to 4950', 2 holes per ft.. Swab test and Sand Frac if needed to increase fluid. If the 2nd stringer of the Heath Sand is uneconomical squeeze w/Latex Cmt. and Sand Notch the first stringer of the Heath Sand 4895' and 4896'. Swab test and Sand Frac if needed to increase fluid. All measurement G&M Log and assuming that the cement is bonded through the Heath Sand.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Field Production Superintendent March 1, 1965

(This space for Federal or State office use)

APPROVED BY

TORIC. SGD.) HILLARY A. ODEN

TITLE

DISTRICT ENGINEER

DATE

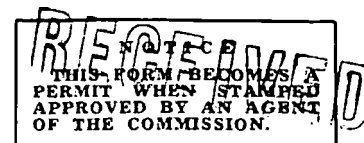
MAR 4 1965

CONDITIONS OF APPROVAL, IF ANY:

(SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY



JUL 26 1965

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment Temp.	XX
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

March 4, 1965

Following is a ~~report of work done~~ on land ~~leased~~ described as follows:

LEASE A-029305A

MONTANA
(State)

Roosevelt
(County)

East Poplar Unit
(Field)

Well No. EPU No. 14 C SE SE Section 3 28N 51E MPM
(m. sec.) (Township) (Range) (Meridian)

The well is located 660 ft. from ~~SS~~ line and 660 ft. from ~~SS~~ line of Sec. 3

LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION, AND SHOW LEASE BOUNDARY

The elevation of the derrick floor above the sea level is 2088

READ CAREFULLY

DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

RECEIVED

MAR 8 1965

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

See Attached Sheet

Approved subject to conditions on reverse of form

Date

By Title

District Office Agent

Company MURPHY OIL CORPORATION

By

Title Field Production Superintendent

Address P.O. Box 547 Poplar, Montana

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

OVER

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TR ~~PLICATE~~
(Other instruct on re-
verse side)Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

A-029305A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

East Poplar Unit

8. FARM OR LEASE NAME

9. WELL NO.

EPH No. 14

10. FIELD AND POOL, OR WILDCAT

East Poplar

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

C SE SE Section 3,

T28N, R51E

12. COUNTY OR PARISH 13. STATE

Roosevelt

Montana

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)1. OIL ☒ WELL GAS ☐ WELL OTHER ☐

2. NAME OF OPERATOR

MURPHY OIL CORPORATION

3. ADDRESS OF OPERATOR

P.O. Box 547 Poplar, Montana

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

660' from S line and 660' from E line

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

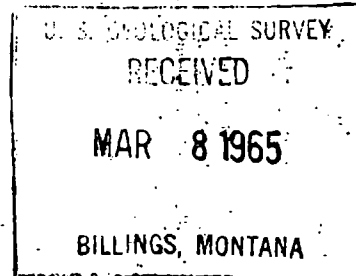
2088 Gr.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☐(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐Temp. ABANDONMENT* ☒(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

See Attached Sheet

18. I hereby certify that the foregoing is true and correct

SIGNED ORIGINAL SIGNED BY M. T. JAMES TITLE Field Production Superintendent Date March 4, 1965

(This space for Federal or State office use)

APPROVED BY (ORIG. SCD) WILLIAM A. ODEN

TITLE DISTRICT ENGINEER

DATE MAR 8 1965

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

2-28-65 Perforated with Schlumberger through Tubing Magnet Gun 4945' to 4950',
2 holes per foot.

3-1-65 No pressure on tubing. Ran swab. Swabbed tubing to 4918' (top of Model
"K" Packer). Swabbed 8 hours. Swab test as follows:

1st hr.	Rate of 136 NYFD	100% Salt Water
2nd hr.	Rate of 164 NYFD	100% Salt Water
3rd hr.	Rate of 192 NYFD	100% Salt Water
4th hr.	Rate of 164 NYFD	100% Salt Water
5th hr.	Rate of 164 NYFD	100% Salt Water
6th hr.	Rate of 164 NYFD	100% Salt Water
7th hr.	Rate of 164 NYFD	100% Salt Water
8th hr.	Rate of 164 NYFD	100% Salt Water

Chlorides 38,000 PPM

3-2-65 Squeezed the Heath Sand perforations 4945'-4950' w/50 sacks of Latex
Cement.

3-3-65 Perforated Heath Sand with Schlumberger through Tubing Magnet Gun 4894'-
4898', 2 holes per foot. Reset packer from 4780' to 4878'. Ran swab.
Swab test as follows:

1st hr.	130 NYFD	99% Water Cut	1.5 BOPD, 148.5 NYFD
2nd hr.	137 NYFD	99% Water Cut	1 BOPD, 136 NYFD
3rd hr.	109 NYFD	100% Water Cut	
4th hr.	109 NYFD	100% Water Cut	
5th hr.	109 NYFD	100% Water Cut	

Tubing filled overnight. Did not flow. No oil on top of fluid.

3-4-65 Temporarily Abandoned.

(SUBMIT IN QUADRUPLICATE)
TO

NOTICE
THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well		Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment	Temp. XX
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well		Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

March 4, 1965

Following is a ~~notice of intention to drill~~ report of work done on land ~~owned~~ leased described as follows:

LEASE **A-029305A**

MONTANA (State) **Roosevelt** (County) **East Poplar Unit** (Field)

Well No. **RPU No. 14** **C SE SE Section 3** **28N** **51E** **NPM**
(m. sec.) (Township) (Range) (Meridian)

The well is located **660** ft. from **XX** line and **660** ft. from **XX** line of Sec. **3**

LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION, AND SHOW LEASE BOUNDARY

The elevation of the derrick floor above the sea level is **2088**

READ CAREFULLY

DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

DETAILS OF WORK
RESULT

RECEIVED

MAR 8 1965

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

See Attached Sheet

Approved subject to conditions on reverse of form

Company **MURPHY OIL CORPORATION**

Date **JUL 23 1965**

By

By **ORIGINAL SIGNED BY:**

Title **Field Production Superintendent**

J. A. Hug, Supervisor Title

Address **P.O. Box 547 Poplar, Montana**

District Office Agent

NOTE:—Reports on this Form to be submitted to the District Agent for Approval in Original.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES

DATE OF APPROVAL

OVER



2-28-65

Perforated with Schlumberger through Tubing Magnet Gun 4945' to 4950',
2 holes per foot.

3-1-65

No pressure on tubing. Ran swab. Swabbed tubing to 4918' (top of Model
"P" Packer). Swabbed 8 hours. Swab test as follows:

1st hr.	Rate of 136 BWPD	100% Salt Water
2nd hr.	Rate of 164 BWPD	100% Salt Water
3rd hr.	Rate of 192 BWPD	100% Salt Water
4th hr.	Rate of 164 BWPD	100% Salt Water
5th hr.	Rate of 164 BWPD	100% Salt Water
6th hr.	Rate of 164 BWPD	100% Salt Water
7th hr.	Rate of 164 BWPD	100% Salt Water
8th hr.	Rate of 164 BWPD	100% Salt Water

Chlorides 38,000 PPM

3-2-65

Squeezed the Heath Sand perforations 4945'-4950' w/50 sacks of Latex
Cement.

3-3-65

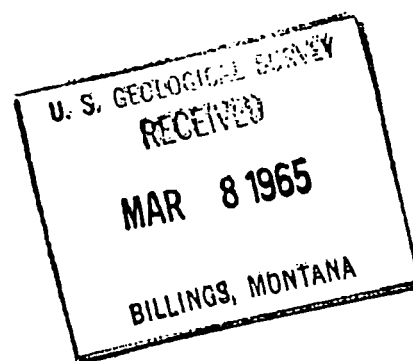
Perforated Heath Sand with Schlumberger through Tubing Magnet Gun 4894'-
4898', 3 holes per foot. Reset packer from 4780' to 4878'. Ran swab.
Swab test as follows:

1st hr.	150 BWPD	99% Water Cut	1.5 BOPD, 148.5 BWPD
2nd hr.	137 BWPD	99% Water Cut	1 BOPD, 136 BWPD
3rd hr.	109 BWPD	100% Water Cut	
4th hr.	109 BWPD	100% Water Cut	
5th hr.	109 BWPD	100% Water Cut	

Tubing filled overnight. Did not flow. No oil on top of fluid.

3-4-65

Temporarily Abandoned.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-1, 4.
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL

14202564047

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Ft. Peck

7. UNIT AGREEMENT NAME

East Poplar Unit

8. FARM OR LEASE NAME

East Poplar Unit

9. WELL NO.

14

10. FIELD AND POOL, OR WILOCAT

East Poplar Unit

11. SEC., T., R., M., OR BLK. AND
SUBSET OR AREA

C SE SE Section 3,
T28N, R51E

12. COUNTY OR PARISH 13. STATE

Roosevelt MT

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL ☒ GAS ☐ OTHER ☐
WELL ☒ WELL ☐

2. NAME OF OPERATOR

Murphy Oil USA, Inc.

3. ADDRESS OF OPERATOR

P.O. Box 547, Poplar, MT 59255

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

660' from south line and 660' from east line

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

2088' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PILL OR ALTER CASING

FRAC TURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANE

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRAC TURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other)

Temporarily abandoned

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

We would like to leave this well temporarily abandoned while
some workovers that are being done in other areas of the field
are being evaluated.



18. I hereby certify that the foregoing is true and correct

SIGNED

Raymond E. Keeler

TITLE District Manager

DATE March 22, 1990

(This space for Federal or State office use)

APPROVED BY

Arnold E. Dinger

TITLE

ADM-Minerals

DATE

MAR 27 1990

CONDITIONS OF APPROVAL, IF ANY:

See Attached for
Conditions of Approval

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. 14202564047
2. Name of Operator Murphy Oil USA, Inc.	6. If Indian, Allottee or Tribe Name Ft. Peck
3. Address and Telephone No. P.O. Box 547, Poplar, MT 59255 768-3612	7. If Unit or CA, Agreement Designation East Poplar Unit
4. Location of Well (Footing, Sec., T., R., M., or Survey Description) 660' from south line and 660' from east line	8. Well Name and No. EPU No. 14
	9. API Well No. 05048
	10. Field and Pool, or Exploratory Area East Poplar Unit
	11. County or Parish, State Roosevelt Montana

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

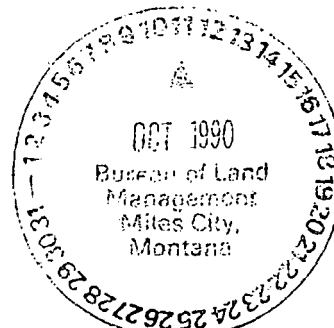
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other	

Temporarily abandoned
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

We are doing a study on water flooding the Heath Formation. This well is perforated in the Heath zone. It would make a good candidate for the injector well.

At this time we would like to set a CIBP @ 4875' and test casing to 500#.



14. I hereby certify that the foregoing is true and correct		
Signed <u>Raymond F. Reedle</u>	Title <u>District Manager</u>	Date <u>10-10-90</u>
(This space for Federal or State office use)		
Approved by <u>Arnold E. Dargatzis</u>	Title <u>ADM-Minerals</u>	Date <u>OCT 12 1990</u>
Conditions of approval, if any:		
See Attached for Conditions of Approval		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Oil USA, Inc.

3. Address and Telephone No.

P.O. Box 547, Poplar, MT 59255 768-3612

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

660' from south line and 660' from east line

FORM APPROVED

Budget Bureau No. 1004-0135
Expires: September 30, 1990

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Ft. Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPI No. 14

9. API Well No.

05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

Roosevelt Montana

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection

Temporarily abandoned

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

10-24-90 Set CIBP @ 4870'

11-07-90 Pressure to 510# held 30 minutes

14. I hereby certify that the foregoing is true and correct

Signed

Raymond Keede

Title

District Manager

Date

11-08-90

(This space for Federal or State office use)

Approved by

Arnold E. Dungan

Title

ADM-Minerals

Date

NOV 13 1990

* 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations, as to any matter within its jurisdiction.

*See Instruction on Reverse Side

CP

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Oil USA, Inc.

3. Address and Telephone No.

P.O. Box 547, Poplar, MT 59255 (768-3612)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE SE Section 3, T28N, R51E

FORM APPROVED

Budget Bureau No. 1004-0135
Expires: September 30, 1990

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Ft. Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

Roosevelt
Montana

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

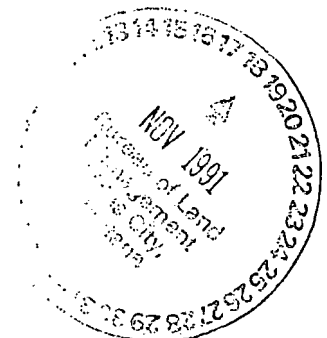
- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other
- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection

Temporarily Abandoned

(Note: Report results of multiple completion on Well Completion or
Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

A CIBP has been set @ 4870' and tested to 500#. We would like to retain this well for an injector well for the Heath Formation.



14. I hereby certify that the foregoing is true and correct

Signed Raymond Reese

Title District Manager

Date 11-15-91

(This space for Federal or State office use)

Approved by Chas E. Laker

Title Acting ADM - Minerals

Date NOV 19 1991

Conditions of approval, if any:

See Attached for
Conditions of Approval

5 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Oil USA, Inc.

3. Address and Telephone No.

P.O. Box 547, Poplar, Montana 59255 (768-3612)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE SE Section 3, T28N, R51E

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Ft. Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

**Roosevelt
Montana**

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

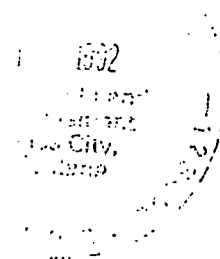
TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other **Temp. Abandoned**
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

We would like to retain this well for a Water Flood Injector well for the Heath Sand Formation. A CIBP was set at 4870' and tested to 500#.



14. I hereby certify that the information is true and correct

Signed **RAYMOND REEDE**

Title **District Manager**

Date

(This space for Federal or State office use)

Approved by *[Signature]*
Conditions of approval, if any:

Title **ADM - Minerals**

Date

NOV 30 1992

**See Attached for
Conditions of Approval**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Ft. Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

Roosevelt
Montana

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Exploration & Production Company

3. Address and Telephone No.

P.O. Box 547, Poplar, MT 59255 (768-3612)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE SE Section 3, T28N, R51E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

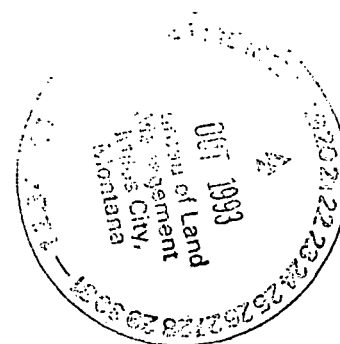
TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other Temp. Abandoned
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

We would like to retain this well as an injector well for the Heath Sand Formation. A CIBP was set at 4870' and tested to 500#.



14. I hereby certify that the foregoing is true and correct

Signed Rugman & Reale

Title District Manager

Date 10-19-93

(This space for Federal or State office use)

Approved by Mark P. Smith
Conditions of approval, if any:

Acting Title ADM - Minerals

Date OCT 25 1993

See Attached for
Conditions of Approval

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

OP

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Exploration & Production Company

3. Address and Telephone No.

P.O. Box 547, Poplar, MT 59255 (406-768-3612)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE SE Section 3, T28N, R51E

FORM APPROVED

Budget Bureau No. 1004-0135

Expires: March 31, 1993

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Ft. Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

**Roosevelt
Montana**

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

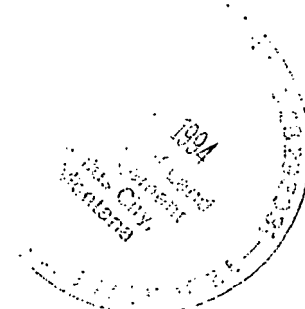
TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other **Temp Abandoned**
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

We would like to retain this well as an injector well for the Heath Sand Formation. A CIBP was set at 4870' and tested to 500#.



14. I hereby certify that the foregoing is true and correct

Signed

Raymond Reed

Title

District Manager

Date **10-24-94**

(This space for Federal or State office use)

Approved by

Mary Ann Spencer

Title

ADM - Minerals

Date

OCT 28 1994

Conditions of approval, if any:

**See Attached for
Conditions of Approval**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Exploration & Production Company

3. Address and Telephone No.

P.O. Box 547, Poplar, MT 59255 (406-768-3612)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE SE Section 3, T28N, R51E

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Ft. Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

Roosevelt
Montana

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

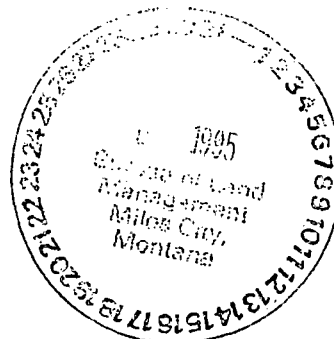
TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other Temp. Abandoned
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

We are in the process of running some 3-D seismographic in the East Poplar Unit and would like to retain the status of temporarily abandoned until the seismograph has been completed and evaluated.



14. I hereby certify that the foregoing is true and correct

ORIGINAL SIGNED BY

Signed RAYMOND REEDE

Title District Manager

Date 10/30/95

(This space for Federal or State office use)

Approved by [Signature]

Title Acting ADM - Minerals

Date NOV 9 1995

Conditions of approval, if any: See Attached for Conditions of Approval

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Exploration & Production Company

3. Address and Telephone No.

P.O. Box 547, Poplar, Mt 59255 406+768-3612

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

660' from the south line and 660' from the east line
SE SE Section 3, T28N, R51E

5. Lease Designation and Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Fort Peck

7. If Unit or CA, Agreement Designation

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

25-085-05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

Roosevelt
Montana

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

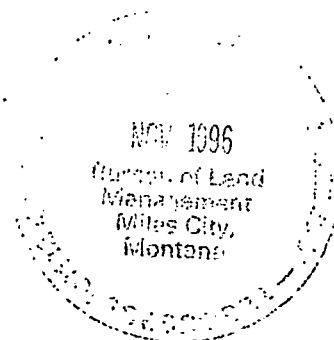
- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other Temp. Abandon

- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

We would like to retain this well as temporarily abandoned until our drilling program has been completed and evaluated.



14. I hereby certify that the foregoing is true and correct BY

Signed RAYMOND REEDS

Title District Manager

Date Nov. 20, 1996

(This space for Federal or State official use)

Approved by [Signature]

Title TEAM LEADER

Date JAN 2, 1997

Conditions of approval, if any:

See Attached for
Conditions of Approval

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

OP

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires July 31, 1996

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Murphy Exploration & Production Company

3a. Address

P.O. Box 547

Poplar, Montana 59255-0547

3b. Phone No. (include area code)

406+768-3612

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE SE Section 3, T28N, R51E

660' from the South line and 660' from the East line

5. Lease Serial No.

14202564047

6. If Indian, Allottee or Tribe Name

Fort Peck

7. If Unit or CA/Agreement, Name and/or No.

East Poplar Unit

8. Well Name and No.

EPU No. 14

9. API Well No.

25-085-05048

10. Field and Pool, or Exploratory Area

East Poplar Unit

11. County or Parish, State

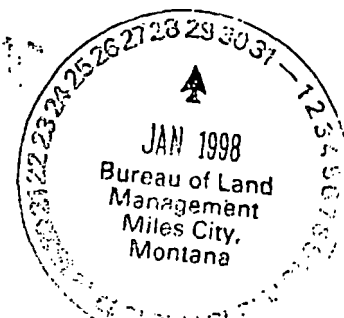
Roosevelt County,
Montana

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input checked="" type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

We would like to retain this well as temporarily abandoned while our seismic data is being re-evaluated.



14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Raymond Reede

Title

District Manager

Signature

Raymond Reede

Date

January 27, 1998

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

John E. Edwards

Title

ADM - Minerals

Date

MAR 11 1998

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

See Attached for
Conditions of Approval

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)



LOCATE WELL CORRECTLY

Form No. 4
(Gen. Rule 206.3 & 231)

RECEIVED

(SUBMIT IN TRIPLICATE)
TO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA
BILLINGS OR SHELBY

RECEIVED

JUL 11 1955

LOG OF WELL

JUL 8 1955

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

Company MURPHY CORPORATION Lease BLM-A-012244 Well No. 14

Address B-13 Behner Building Field (or Area) East Poplar

The well is located 660 ft. from (S) line and 660 ft. from (E) line of Sec. 3

Sec. 3; T. 28N; R. 51E; County Roosevelt; Elevation 2100' K.B.
(D.F., R.B. or G.L.)

Commenced drilling May 18, 1955, 19 ; Completed June 9, 1955

The information given herewith is a complete and correct record of the well. The summary on this page is for the condition of the well at the above date.

Completed as Oil Well
(oil well, gas well, dry hole)

Signed Harold Wilson

Title Division Production Superintendent

Date June 28, 1955

IMPORTANT ZONES OF POROSITY

(denote oil by O, gas by G, water by W; state formation if known)

From <u>5639</u> to <u>5647 (O)</u>	From <u> </u> to <u> </u>
From <u>5657</u> to <u>5672 (O)</u>	From <u> </u> to <u> </u>
From <u>5807</u> to <u>5817 (O)</u>	From <u> </u> to <u> </u>
From <u> </u> to <u> </u>	From <u> </u> to <u> </u>

CASING RECORD

Size Casing	Weight Per Ft.	Grade	Thread	Casing Set	From	To	Sacks of Cement	Cut and Pulled from
13-3/8	48#	H-40	8	28	0	40	50	
9-5/8	36#	H-40	8	983	0	993	400	
5-1/2	15.50#	J-55	8	5823	0	5832	300	

TUBING RECORD

Size Tubing	Weight Per Ft.	Grade	Thread	Amount	Perforations
2-7/8	6.40	J-55	EUE	5633	Open ended

COMPLETION RECORD

Rotary tools were used from 0 to 5833
Cable tools were used from to
Total depth 5833 ft.; Plugged back to T.D.; Open hole from to

PERFORATIONS

Interval	Number and Size and Type
From <u>5657</u> To <u>5665</u>	<u>40, 1/2" Jet</u>

ACIDIZED, SHOT, SAND FRACED, CEMENTED

Interval	Amount of Material Used	Pressure
From <u>5657</u> To <u>5665</u>	<u>2200 gals. acid</u>	

(If P&A show plugs above)

INITIAL PRODUCTION

Well is producing from Madison (pool) formation.

I. P. 162 barrels of oil per 24 hours Pumping
(pumping or flowing)

Neg. Mcf of gas per hours.
133 barrels of water per 24 hours, or 45 % W.C.

(OVER)

RECEIVED

ELECTRO LOG DATA

RECEIVED

JUL 8 1955

JUL 11 1955

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

OIL AND GAS CONSERVATION COMMISSION
TYPE OF LOG
OF THE STATE OF MONTANA

INTERVAL LOGGED

Schlumberger Electrical Survey 2"	0994'	-5832'
Schlumberger Electrical Survey 5"	1996'	-5832'
Schlumberger Microlog 5"	2000'	-5829'
Schlumberger Microlog 25"	5372'	-5829'

LOG TOPS:

Eagle	1113	(+957)
Miobrara	1983	(+117)
Greenhorn	2334	(-234)
Graneros	2542	(-442)
Muddy Sandstone	2680	(-780)
Dakota Silt	3100	(-1000)
Morrison (?)	3500	(-1400)
Vanguard	3910	(-1810)
Rierson	4092	(-1992)
Piper Shale	4270	(-2170)
Piper Limestone	4343	(-2243)
Gypsum Springs	4400	(-2300)
Spearfish	4607	(-2507)
Amsden	4720	(-2620)
Heath	4826	(-2726)
Otter	4996	(-2896)
Kibbey Sandstone	5129	(-3029)
Kibbey Limestone	5292	(-3192)
Madison	5387	(-3287)
"A" Zone	5499	(-3399)
A-B Salt	22'	
"B-1" Zone	5639	(-3539)
"B-2" Zone	5657	(-3557)
"C" Zone	5807	(-3707)

RECEIVED

RECEIVED

JUL 11 1955 COMPLETION DATA JUL 8 1955

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

* CASING: Ran 32 jts. 983.48' of 9 5/8" J-55, 36#, R-2, 8rd. thd. Standard American casing. Landed 10.00' below RKB, Howco shoe at 993.48'. Cemented with 400 sacks regular cement with 2 per cent CaCl₂. Circulated 100 sacks cement. Bumped plug with 1000#. Float held OK. Plug down at 3:15 P.M., 5-20-55.

Ran 178 jts. 5823.50' of 5 1/2" 15.50#, J-55, R-2, 8rd. thd. American casing. Landed 3.50' below RKB and set at 5832'. Schlumberger measure. Ran 240' of Howco scratchers as follows: alternate 5' of scratchers with 15' blank from 4875' to 4970', solid 5490' to 5545', solid 5615 to 5700', alternate 5' of scratchers with 10' blank from 5700' to 5778', and solid scratchers 5778' to 5815'. Ran 5 Howco centralizers at 4950', 5470, 5605', 5712', and 5815'. Halliburton automatic fillup shoe at 5832' and Halliburton baffle collar at 5796'. Cemented with 300 sacks of Slo-set cement with 2 per cent gel. Plug down at 5:05 A.M., 6-7-55. Bumped plug with 1000#. Released pressure. Float held OK. Pipe rotated freely while cementing.

COMPLETION: Tested 5 1/2" casing with 1000#, 30 minutes. Held OK. Ran 182 jts. 5625.26' of 2 3/8" J-55, 4.70#, 8rd. thd. tubing open ended. Landed 7.50' below RKB and set at 5632.76'. Perforated B-2 Zone from 5657' to 5665' Schlumberger measure, with Lane Wells 1 3/4" tubing gun. Acidized with 200 gals. of etching acid followed by 500 gals. of gel, followed by 1500 gals. of etching acid. Formation broke down at 2600 #. Maximum injection rate 2 1/2 bbls. per minute at 2750#. Bleed down pressure 1850#. Spent acid to surface in 11 minutes. Well died in 20 more minutes. Circulated acid water out of tubing 3 times. Found no apparent formation water. Circulated tubing clean and shut well in. Released rig at 10:00 P.M., 6-9-55. Moved rig off location. Moved in swabbing unit to test well. SUMP 400#, SICP 500#. Flowed 18 bbls of fluid by hands. Loaded up with water and died. Swabbed 39 bbls. of fluid with 20 per cent water in 2 hours after unloading water to pits. Swabbed 25 bbls. fluid per hour, 3 per cent water. Let set 4 1/2 hours, would not flow. Ran rods and set pumping unit. Ran D and B insert pump with seating nipple approximately 3500. Test: 1 1/2" pump, 16x4 1/2" stroke, pump depth 3500'. 7-1-55: 162 bbls. oil, 133 bbls. water, water cut 45 per cent. 7-2-55: 162 bbls. oil, 190 bbls. water, water cut 54 per cent. 7-3-55: 198 bbls. oil, 206 bbls. water, water cut 51 per cent.

* Ran 1 jt. 13 3/8", 48#, H-40, 8rd. thd. American casing in 1952. Set at 40'. Cemented with 50 sacks cement.

RECEIVED

DRILL STEM TESTS

JUL 8 1955

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA - BILLINGS

No Drill Stem Tests were run on this well.

RECEIVED

JUL 11 1955

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

=====

C O M P L E T I O N D A T A

=====

CASING: Ran 1 jt. of 13-3/8", 48#, H-40, 8rd. thd. American casing in 1952.
Set casing at 40'. Cemented with 50 sacks of cement.

Ran 32 jts. 983.48' of 9-5/8", J-55, 36#, R-2, 8rd. thd., Standard C American casing. Landed 10.00' below RKB. Howco shoe at 993.48'. Cemented with 400 sacks of regular cement with 2 percent CaCl₂. Circulated 100 sacks of cement. Bumped plug with 1000#, float held ok. Plug down at 8:15 P.M., 5-20-55.

Ran 178 jts. 5323.50' of 5-1/2", 15.50#, J-55, R-2, 8rd. thd., American casing. Landed 8.50' below RKB and set at 5332', Schlumberger measure. Ran 240' of Howco scratchers as follows: alternate 5' of scratchers with 15', blank from 4875' to 4970', solid from 5490' to 5545', solid from 5615' to 5700', alternate 5' of scratchers with 10', blank from 5700' to 5778', and solid scratchers from 5778' to 5818'. Ran 5 Howco centralizers at 4950', 5470', 5606', 5712', and 5818'. Halliburton automatic fillup shoe at 5332' and Halliburton baffle collar at 5796'. Cemented with 300 sacks of Slc-set cement with 2 percent gel. Plug down at 5:05 A.M., 6-7-55. Bumped plug with 1000#, released pressure, float held ok. Pipe rotated freely while cementing.

COMPLETION: Tested 5-1/2" casing with 1000# for 30 minutes, held ok.
Ran 182 jts. 5625.26' of 2-3/8", J-55, 4.70#, 8rd. thd. tubing, open ended. Landed 7.50' below RKB and set at 5632.76'. Perforated "B-2" Zone 5657'-5665', Schlumberger measure, with Lane Wells 1-3/4" tubing gun. Acidized with 200 gallons of etching acid followed by 500 gal. longs of gel, followed by 1500 gallons of etching acid. Formation broke down at 2600#, maximum injection rate 2-1/2 barrels per minute at 2750#, bleed down pressure 1850#. Spent acid to surface in 11 minutes. Well died in 20 more minutes. Circulated acid water out of tubing 3 times. Found no apparent formation water. Circulated tubing clean and shut well in. Released rig at 10:00 P.M., 6-9-55. Moved rig off location.

Moved in swabbing unit to test well. SITF--400#, SICP--500#. Flowed 18 barrels of fluid by heads. Loaded up with water and died. Swabbed 39 barrels of fluid with 20% water in 2 hours after unloading water to pits. Swabbed 25 BFPH, 3% water. Let set 4-1/2 hours, would not flow. Ran rods and set pumping unit. Ran D and B insert pump with seating nipple approximately 3500.

Tested on a 1-1/2" pump, 16 x 54" stroke, pump depth 3500', 162 barrels of oil, 133 barrels of water, water cut 45%.

E L E C T R O L O G D A T A

TYPE OF LOGINTERVAL LOGGED

Schlumberger Electrical Survey 2"	0994' - 5832'
Schlumberger Electrical Survey 5"	1996' - 5832'
Schlumberger Microlog 5"	2000' - 5829'
Schlumberger Microlog 25"	5372' - 5829'

LOG TOPS

	<u>Depth</u>	<u>Datum</u>	<u>Thickness</u>
Eagle	1143	+ 957	
Niobrara	1983	+ 117	
Greenhorn	2334	- 234	
Graneros	2542	- 442	
Muddy Sd.	2880	- 780	
Dakota Silt	3100	-1000	
Morrison (?)	3500	-1400	
Vanguard	3910	-1810	
Rierdon	4092	-1992	
Piper Sh.	4270	-2170	
Piper Ls.	4343	-2243	
Gypsum Sprgs	4400	-2300	
Spearfish	4607	-2507	
Amnden	4708	-2608	
Heath	4826	-2726	
Otter	4996	-2896	
Kibbey Sd.	5129	-3029	
Kibbey Ls.	5292	-3192	
Madison	5387	-3287	
A-1	5466	-3366	3'
A-2	5482	-3382	4'
A-3	5499	-3399	11'
A-4	5518	-3418	18'
B-1	5639	-3539	9'
B-2	5657	-3557	17'
B-3	5679	-3579	7'
B-4	5710	-3610	6'
B-5	5750	-3650	?
C-1	5796	-3696	?
C-2	5807	-3707	15'

=====

DRILL STEM TESTS

=====

NO DRILL STEM TESTS WERE RUN ON THIS WELL.

=====

CORE ANALYSIS REPORTS

=====

NO CORE ANALYSIS WAS RUN ON THIS WELL.

=====

C O R E D E S C R I P T I O N S

=====

NO CORES WERE RUN ON THIS WELL

----- M U D P R O G R A M S U M M A R Y -----

MUD ADDITIVES USED:

Aquagel - - - - -	-100 sacks	Hydroton - - - - -	-126 sacks
Barafos - - - - -	3 sacks	Soda Ash - - - - -	18 sacks
Bariod - - - - -	-476 sacks	Tannex - - - - -	33 sacks
Driscose - - - - -	18 sacks	Zeogel - - - - -	11 sacks

Mud Cost - - - - -	\$4,443.00
Drayage - - - - -	<u>304.32</u>

Total Mud Cost - - - - - \$4,747.32

SUMMARY:

The 12 1/4" surface hole was drilled to 1014' using a gel mud with very light chemical treatment. In addition to the 6 sacks of gel used which cost \$13.86, additives of 400 sacks of Barites and 3 sacks of phosphate totaling \$1,142.50 were used. At a depth of approximately 800' the weight was raised to 12 lbs. per gallon to provide sufficient hydrostatic head to hold the strong gas and water flows usually encountered in the Judith River sand. The total mud cost for drilling the surface hole was \$1,156.36.

Drilling was continued to approximately 4400' with water and the mud was converted to a high pH red mud at this point. Chemical additions of Hydroton, tannex, soda ash and driscose were made to control the pH, viscosity, and water loss while drilling the limestone, anhydrite, salt, and dolomite sections. The weight was maintained from 10.3 lbs. per gallon to 10.5 lbs. per gallon with barites or water. The water loss was maintained at or below 15cc after reaching the pay zones. The use of hydroton was effective in controlling the PH above 12 and no serious calcium fluff was obtained.

No coring or testing was done and the mud properties were maintained reasonably constant. No trouble was encountered while drilling.

Mud characteristics while drilling were as follows:

Depth	Weight	Viscosity	Wtr. Loss	F.C.	Ph.
4521	9.9	38			11.6
4675	10.1	45	20.	2/32	12.
5032	10.4	43	22.	2/32	12.5
5197	10.6	49	19.	2/32	12.6
5449	10.4	46	15.6	2/32	12.6
5488	10.4	50	15.3	3/32	11.7
5603	10.5	48	13.4	2/32	13.
5657	10.5	51	14.0	3/32	13.
5730	10.5	58	16.0	2/32	12.5

Drilling Bit and Totco Records

Run No.	Make	Type	Ser. No.	Size	From	To
1	Reed	IT3	Re-run	12 1/4	0	1014
2	Hughes	OSC-3-J	51202	8 3/4	1014	2720
3	Hughes	"	49291	"	2720	3288
4	"	OSC-J	59416	"	3288	3364
5	"	"	60206	"	3364	3623
6	"	"	88460	"	3623	3884
7	"	"	9899	"	3884	3928
8	"	"	7117	"	3928	4086
9	"	"	9529	"	4086	4146
10	"	"	65547	"	4146	4418
11	"	QWVJ	57791	"	4418	4577
12	"	QWV	91360	"	4577	4722
13	"	"	75607	"	4722	4888
14	"	"	91233	"	4888	4940
15	"	"	76134	"	4940	5017
16	"	QWVJ	58334	"	5017	5200
17	"	QWN	58328	"	5200	5355
18	"	"	58331	"	5355	5428
19	"	"	41798	"	5428	5726
20	"	QWV-J	46569	"	5726	5828

Totco Record

<u>Depth Out</u>	<u>Degrees Off</u>
250	3/4
720	2 1/4
848	2
975	1 3/4
1430	3/4
3324	2 1/2
3854	1/4
4850	2
5017	2
5200	1

S A M P L E D E S C R I P T I O N

2160	2180	Shale; gray, firm, slightly calcareous, numerous small tan calcareous specks. Some soft light gray sandy bentonite, trace pyrite.
2180	2200	Shale; as above with slight inclusions in bentonite.
2200	2240	Shale; medium gray, medium firm, slightly calcareous, no specks, medium soft, trace to some light gray bentonite, trace speckled shale.
2240	2290	Shale; as above with decrease in bentonite and trace light gray, very fine grain, calcareous, silty sandstone. No show.
2290	2410	Shale; dark gray, firm, medium hard, calcareous, numerous small tan specks. Trace glauconite pellets at 2300'; trace light gray bentonite.
2410	2440	Shale; light to medium gray, medium firm, slightly calcareous; trace to some dark gray, soft, fissile shale.
2440	2520	Shale; dark gray, medium soft, fissile, numerous small brown plant spores (?); trace light gray to medium gray calcareous shale as above.
2520	2740	Shale; as above with trace light gray, sandy shale and trace light gray, dirty, fine grain sandstone.
2740	2800	Shale; light-medium gray, medium firm, slightly micaceous, slight inclusions in dirty gray, fine grain, sub-angular, tight, argillaceous sandstone.
2800	2940	Shale; as above with slight inclusions in sandstone as above; trace fine grained glauconitic sandstone.
2940	3000	Shale; as above with approximately 40% light gray to clear, fine to medium grain, slightly glauconitic, sub-angular sandstone.
3000	3090	Shale; medium-dark gray, medium soft, slightly fissile, non-calcareous; faint trace of shale and sandstone as above in top 10', occasional thin streak dirty yellow-gray bentonite.
3090		<u>Sample Top Dakota Silt</u>
3090	3130	Shale; as above with trace light gray, soft, siltstone.
3130		<u>Sample Top Dakota Sandstone</u>
3130	3240	Sandstone; light gray to white, fine grain, well sorted, porous, and permeable, sub-rounded; some dark gray shale as above. No show.

SAMPLE DESCRIPTION CONTINUED

- 3240 3260 Shale; dark gray, firm, splintery; some light gray-white, fine to medium grain sandstone as above.
- 3260 3300 Sandstone; white, medium grained, sub-rounded, well sorted, good porosity and permeability, some shale as above.
- 3300 3440 Shale; dark gray, firm, splintery; trace sandstone as above; trace medium to coarse quartz grains interbedded in a brown siliceous matrix.
- 3440 Sample Top Morrison
- 3440 3460 Shale; medium to dark gray, firm, slightly fissile, non-calcareous, slightly glauconitic.
- 3460 Sample Top Swift
- 3460 3500 Shale; as above with some white, fine grained, well sorted, tight, slightly glauconitic sandstone.
- 3500 3580 Shale; dark gray to black, firm, medium hard, splintery, non-calcareous.
- 3580 Sample Top Vanguard
- 3580 3630 Shale; as above with trace soft, light gray siltstone.
- 3630 3650 Shale; as above with approximately 40% white, fairly well sorted, sub-angular, tight, very slightly calcareous, very glauconitic sandstone.
- 3650 3810 Shale; gray to brownish-gray, medium hard, splintery, firm, trace glauconitic sandstone.
- 3810 3900 Shale; gray, splintery, firm, trace dirty gray, very fine grain, slightly glauconitic sandstone.
- 3900 Sample Top Rierdon
- 3900 3920 Shale; light gray-green, firm, medium hard, calcareous.
- 3920 3940 Shale; as above with some very fine grained, tight, well sorted, calcareous, glauconitic sandstone.
- 3940 4010 Shale; gray-green, light gray-brown, splintery, medium soft, calcareous; trace calcareous sandstone as above.
- 4010 4030 Shale; dark gray-brown, medium soft, slightly fissile, numerous small, thin, black, carbonaceous laminae; some gray-green, calcareous shale.
- 4030 4250 Shale; gray and gray-green, medium firm, slightly splintery, trace glauconite, slightly calcareous.
- 4250 Sample Top Piper Shale
- 4250 4340 Shale; as above with trace dark red, firm, slightly silty shale. Trace soft white anhydrite.

SAMPLE DESCRIPTION CONTINUED

4340		<u>Sample Top Piper Limestone</u>
4340	4390	Shale; as above with trace dark brown, cryptocrystalline, dense limestone; trace red shale as above.
4390	4415	Shale; gray and gray-green, medium firm, medium hard.
4415	4430	Shale; light to medium gray, soft, gypsiferous, slightly silty; some gray-green shale as above.
4430	4445	Shale; gray, medium firm, medium hard; some soft gray shale as above; trace medium brown, dense, cryptocrystalline, limestone.
4445	4475	Shale; light gray-green, medium hard, medium firm, slightly calcareous; some medium to dark gray, soft, gypsiferous shale; trace brown limestone; trace red shale.
4475	4510	Shale; gray and gray-green as above with some light to medium brown, dense, medium soft, amorphous to cryptocrystalline limestone.
4510	4520	Shale; medium to dark gray, medium hard, firm, some gray-green calcareous shale; trace red shale.
4520	4590	Shale; as above with trace light to medium brown, medium soft, amorphous limestone, trace pyrite.
4590	4635	Shale; dark gray, medium hard, firm; some orange-red, very fine grained, very anhydritic, well sorted sandstone.
4635		<u>Sample Top Spearfish</u>
4635	4700	Sandstone; orange-red, medium to fine grained, fairly well sorted, very anhydritic; some red, soft, anhydritic shale; trace soft white anhydrite.
4700		<u>Sample Top Ansdan</u>
4700	4710	Shale; dark gray, medium hard, firm, slightly calcareous; trace red and green, variegated soft shale; trace soft pink dolomite.
4710	4725	Shale; dark brownish-red, medium soft, firm; some red and pale green variegated soft shale; some light gray-green splintery shale.
4725	4750	Limestone; light to dark brown, microcrystalline, very dense, fossiliferous; some variegated shale as above.
4750	4760	Shale; medium gray to gray-green, medium firm, splintery, slightly calcareous; some green and red variegated shale; trace limestone as above.

SAMPLE DESCRIPTION CONTINUED

- 4760 4785 Limestone; light gray-brown, medium hard, amorphous, fossiliferous; some red and green variegated shale; trace gray shale.
- 4785 4805 Shale; medium gray, firm, calcareous; some red and pale green variegated shale; trace dark gray to black, non-calcareous shale.
- 4805 Sample Top Heath
- 4805 4835 Shale; dark gray, firm, noncalcareous, slightly fissile; trace red and green variegated shale as above.
- 4835 4845 Shale; gray-green, medium hard, firm, splintery, non-calcareous; some red, green, and lavender, splintery shale; some black, carbonaceous, chunky shale; trace soft red silt.
- 4845 4855 Shale; as above with slight trace fine, medium gray, sub-angular, fairly well sorted sandstone.
- 4855 4875 Shale; predominantly gray-green, with some gray and red; firm, splintery to chunky, slightly calcareous, trace sandstone as above.
- 4875 4895 Sandstone; red-brown, medium to coarse grain, poorly sorted, angular, fair porosity, very slight oil stain, dull yellow fluorescence, slight cut with CCl_4 .
- 4895 4940 Shale; red, green, gray, brown, medium soft, firm.
- 4940 4980 Shale; as above with some red and gray, coarse to medium grain, poorly sorted, angular sandstone.
- 4980 5000 Sandstone; fine to coarse grain, red staining, good visible porosity, poorly sorted, angular; some varicolored shale as above.
- 5000 5035 Shale; vari-colored, firm, with some vivid green.
- 5035 5100 Shale; vari-colored as above with some light brown, micro-crystalline, fairly dense, fossiliferous limestone.
- 5100 5120 Shale; vari-colored with medium gray predominant, medium soft, firm; trace light brown, limestone.
- 5120 5145 Shale; gray, firm, medium hard, very slightly calcareous, trace green and red shale.
- 5145 Sample Top Kibbey Sandstone
- 5145 5155 Shale; as above with some light gray with red stain, fine to medium grain, poorly sorted, sub-rounded sandstone; some soft red siltstone.

SAMPLE DESCRIPTION CONTINUED

- 5155 5200 Sandstone; red, fine to medium grained, poorly sorted, frosted grains, sub-rounded.
- 5200 5225 Shale; red, medium hard, firm; some gray calcareous shale; some sandstone as above.
- 5225 5250 Sandstone; clear with some red staining; medium grain, poorly sorted, frosted, sub-angular; some red and gray-green shale.
- 5250 5285 Sandstone as above with inclusions in red shale. Shale; red and gray, medium hard, firm.
- 5285 Sample Top Kibbey Limestone
- 5285 5370 Limestone; cream to light brown, hard, dense, amorphous. Sandstone; some red, fine grained, angular. Shale; grays and reds.
- 5370 5390 Sandstone; red, very fine grained, slightly calcareous. Limestone; trace as above. Shale; red and grays and some gray-greens.
- 5390 Sample Top Charles
- 5390 5423 Shale; as above. Limestone; trace white. Anhydrite trace. Sandstone trace as above.
- 5423 5476 Limestone; gray to gray-brown, cryptocrystalline, dense, hard. Shale; trace green, gray-green and some reds. Anhydrite; scattered to prevalent.
- 5476 Sample Top "A" Zone.
- 5476 5488 Limestone; medium gray, cryptocrystalline, dense, hard, scattered pale yellow fluorescence and slight cut. Shale; trace grays and some reds.
- 5488 5532 Limestone; chocolate brown, amorphous, dense, no show. Anhydrite trace.
- 5532 5562 Limestone; prevalent, gray to buff, microcrystalline, dense. Shale; scattered reds, gray and greens.
- 5562 5600 Limestone; light gray, amorphous, dense, no show. Anhydrite; prevalent.
- 5600 5628 Anhydrite; limestone; light gray, amorphous, dense.
- 5628 5635 Dolomite; anhydritic, fine crystalline, dense.
- 5635 Sample Top "B-1" Zone
- 5635 5670 Limestone; medium gray-brown, microcrystalline, hard, fair golden fluorescence and stain on limestone. Anhydrite; scattered.

SAMPLE DESCRIPTION CONTINUED

5670 5700 Dolomite; gray-brown, microcrystalline, dense.
Limestone; as above scattered.

5700 5810 Limestone; gray-brown, micro to crypto-crystalline, dense;
Shale; scattered, medium gray to black.

5810 5828 Limestone; gray-brown, medium crystalline to sucrosic, some
pin-point porosity, spotty golden yellow fluorescence. Shale;
as above.

Total Depth 5828' Driller equals 5833 Schlumberger

This well is T.A. with open perf in 4895-98, 5640-43
and packers at 4933 and 5550.

B-1 5640-43
C i O P B 5550

2-28-65 perf 4945-4950

3-2-65 set C i O P B 4939 + squeeze
Heath 4945-50 + squeeze

3-3- perf 4895-98

Location: C SW SE Sec. 3-T29N-R51E
 Spacing = 40 acres
 Elevation: 2088 Gr. - 2100 K.B.
 Spudded: 5-18-55
 Completed: 6-9-55
 T.D.: 5828' Drlr = 5833' Schl.
 Prod. Zones: B-2 (5657-5665')

Coring Intervals:

None

Schlumberger Tops

	Depth	Datum	Thickness
Judith River			
Greenhorn	2334	= 234	
Muddy Sd	2080	= 780	
Dakota Silt	3100	-1000	
Piper Ls	4343	-2243	
Amsden	4720	-2620	
Heath	**4826	-2726	
Otter	4936	-2896	
Kibbey Sd	5129	-3029	
Kibbey Ls	5292	-3192	
Madison	5387	-3287	
A-1	**5466	-3366	3'
A-2	**5482	-3382	4'
A-3	**5499	-3399	11'
A-4	5518	-3418	18'
B-1	**5639	-3539	9'
B-2	5657	-3557	17'
B-3	**5679	-3579	7'
B-4	**5710	-3610	6'
B-5	5750	-3650	?
C-1	**5796	-3696	?
C-2	5807	-3707	15'

Drill Stem Tests:

None

History Subsequent to Completion:

**Probable prod. Zones (From DST structural position, etc.)

None

*Shows

Drill Pipe Corrections (Made)

5215' Driller = 5200' SLM (-15')

SERVICE & TESTING

WORKOVER NO. 1

Date October 2, 1961

RECEIVED

OCT 24 1961

Lease & Well No. East Poplar Unit Well No. 14

Field East Poplar

County Roosevelt

State Montana

Well Location C SE SE Section 3, T28N, R51E

AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

Status Prior to Present Job:

Date Completed June 9, 1955

Date of Last Workover None

TD 5833 PBTD 5794 Producing Zone B zone of Madison Formation

Perforations 5657-5665 Cumulative Production 120,630 BO, 444,095 BW

Latest Test Pumping 256 BFPD, 90% water (26 BOPD, 230 BFPD)

Justification for Workover:

To increase production, test Latex cement for water shut off and attempt to determine the water cut's of the B zones individually.

Summary of Workover:

7-7-61 5794' PBTD. Moved in pulling unit to squeeze B zone and recomplete.

7-8-61 5794' PBTD. Pulled rods, dia-logged 2½" tbg. Found 29 thin jts. Pulled tbg. Laying down bad 2½" and 2 3/8" tbg. Ran tbg. with Baker full bore packer. Installed BOP.

7-9-61 5794' PBTD. Set Baker full bore pkr. at 5666' to test csg. below perf. Press. up to 2600#, tbg. split. Pulled tbg. Found split jt. 34 doubles down. Ran tbg. and set pkr. at 5666'. Test csg. and tbg. w/ 3500#, held. Reset pkr. at 5649' and test csg, BOP w/ 1500#, held. Squeezed B zone perf. 5657-5665 w/ 60 sax Latex cement. Broke formation with 1200#. Ran fresh wtr. ahead and behind cement. Squeezed 35 sax cmt. out in formation. Max. pressure 4500#, held OK. Reversed out 25 sax cmt. Washed down through perfs. Started out of hole with tbg. Right angle drive on rig broke. Shut down to repair.

7-14-61 5757' PBTD. Test squeeze with 1500#, held OK. Pulled tbg. out of hole. Ran Gamma-ray Neutron and collar log w/ Wireline, Inc. Perf. B zone with Wireline jet notch gun. Two holes 5658' and 5661'. Ran tbg. w/ Baker Model R pkr. Set pkr. at 5651' and swab tbg. dry. No apparent fluid movement.

7-15-61 5747' PBTD. Ran swab, rec. 300' fluid, slight show of oil. Acidized B zone, 5658-5661 w/ 500 gals Dowell retarder acid. Spot acid down tbg. Press. up 2200# and let soak for 10 mins. Increased press. to 3400#, acid started feeding. Formation started breaking back w/ 3 bbls. in formation. Inj. remainder of acid at rated of ½ BPM at 2,000#. Five mins. bleed down, 550#. Swabbed spent acid and water. Released packer and pulled tbg. Ran tbg. with Halliburton anchor

7-17-61 (cont'd.) catcher and seating nipple. Seating nipple at approx. 5490'.

7-18-61 5747' PBTD. Rigged up pulling unit and fished rods. Broken pin at 2200'. Started well pumping.

7-19-61 to 7-25-61 Testing. Last test 246 BFPD, 96% water. (10 BOPD, 236 BWPD). Temporarily dropped from report.

8-22-61 5650'. Tested since 7-19-61. Production leveled off at 7 BOPD, 232 BWPD. Pulled rods and tbg. Ran junk basket on wire line. Set Model K cement retainer at 5652 on Lane Wells Wire Line. Ran tbg. and squeezed B zone w/ 50 sax Latex cmt. Broke formations with 2600#. Squeezed 28 sax cmt. out in formation. Max. squeeze press. 4,000#. Held OK. Reversed out 22 sax cmt. Pulled tbg. out of hole and installed blind rams. SI overnight. Test squeeze with 1500#. Held OK.

8-23-61 5650' Perforated B zone from 5640 to 5643 with Lane Wells NCF 11' Casing jet with 4 SPF. Ran tbg w/ Baker Model R pkr., and set at 5638'. Swabbed tbg. dry. Let set one hr. then made run with swab. (dry). Acidized B (5640-5643) w/ 500 gals retarded acid. Spotted acid down tbg. Tested csg. with 1500#, held OK. Pressured up to 1500#. Pressure would bleed off very slow. Inj. 2 bbls. acid at rate of .25 BPM. Increased pressure to 2500#. Inj. 4 bbls. acid at rate of .25 BPM. Inj. remainder of acid at rate of .33 BPM w/ press. to 2900#. No break down through job. 10 min. shut in, 1800#. Opened to pits and swabbed spent acid, water and oil. First 2 hrs swabbing to test tank at rate of 110 BFPD, 85% water. Last 2 hrs, swabbed at rate of 82 BFPD, 80% water. (16 BOPD, 66 BWPD). Shut in overnight.

8-24-61 5650'. Swabbed 2 hrs at rate of 130 BFPD, 70 to 75% water. Re-acidized B zone 5640-5643 with 1000 gals retarded acid. Spotted acid down tbg. Injected acid at rate of .75 BPM at 3,000#. No break throughout job. 10 min. shut in pressure, 1600#. Swabbed spent acid water and oil to pit. Swabbed 4 hrs. to test tank. Last 2 hrs. swabbed at rate of 109 BFPD (27 BOPD, 84 BWPD)

8-25-61 5650'. Pulled tbg. to remove Model R packer. Ran tbg. with Halliburton anchor catcher and seating nipple. Ran rods with 16' Oilwell pump.

8-29-61 5650 PBTD. On 24 hr. test, pumped 80 BFPD, 21% water. (63 BOPD, 17 BWPD). This is initial potential test on B zone. To drop from report: Workover successful.

Recap of Workover:

1. Final Perforations: 5640-5643
2. Final PBTD 5650'.
3. Initial Potential: 80 BFPD, 21% water (63 BOPD, 17 BWPD).
4. Geological name of producing zone: B zone of Madison Formation
5. Downhole equipment: 2 7/8" tubing @ 5536'.
5450' 7/8" & 3/4" rods
2 1/2" x 1 1/2" x 16' pump.

RECEIVED
OCT 24 1961
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF MONTANA

WORKOVER HISTORY NO. 2

August 29, 1962

Lease and Well No. _____ East Poplar Unit Well No. 14

Field East Poplar County Roosevelt State Montana

Well Location _____ C SE SE Section 3, T28N, R31E

Status Prior To Present Job:Date Completed June 9, 1955 Date of Last Workover October 2, 1961TD 5833' PBTD 5650' Producing Zone B-1 of Madison FormationLatest Test Pmpg 38 BFPD, 55% wtr (17BOPD, 21 BWPD)Justification for Workover:

To increase Production.

Summary of Workover:

8-21-62 5650' PBTD.

Moved in pulling unit & pulled rods & tbg. Ran tbg w/Baker Model "R" packer. Set packer at 5634' & test casing & well head w/1500#. Held. Acidized B-1 Zone (5640-43') w/3 bbls Visco B-3-S acid mixed in 15 bbls fresh wtr. Ran 2 bbls fresh wtr ahead & behind acid. Injected acid at rate of 1/3 BPM w/press at 1000# building slowly to 2500# at end of job. Shut well in & let acid set on formation 24 hrs.

8-22-62 5650' PBTD.

Pulled tbg out of hole & removed Baker packer. Ran tbg back same as before. Ran rods w/2 1/2"x1 1/2"x16 oil well pump. Started well pumping.

WELL TEST BEFORE AND AFTER TREATMENT

Date	BFPD	W/C	BOPD	BWPD	Remarks
8-02-62	38	55	17	21	Before treatment
8-23-62	98	38	61	37	After treatment pumping load oil
8-24-62	59	72	16	42	
8-25-62	42	70	13	29	
8-26-62	41	65	14	26	
8-27-62	49	65	17	32	Pumping fluid level 5270'

Recap of Workover:

1. Final Perforations: 5640-5643' (Unchanged)
2. Final PSTD: 5650' (Unchanged)
3. Workover Potential: Pump 49 BFPD, 66% wtr (17 BOPD, 32 BWPD)
4. Geological name of Producing Zone: B-1 of Madison Formation (Unchanged)
5. Downhole Equipment: (Unchanged) 2 7/8" tubing @ 5536'.
5450' 7/8" & 3/4" rods
2 1/2" x 1 1/2" x 16 pump

WORKOVER HISTORY NO. 3

December 13, 1962

Lease and Well No. East Poplar Unit Well No. 14
Field East Poplar County Roosevelt State Montana
Well Location C 32 E2 Section 3, T29N, R11E

Status Prior To Present Job:

Date Completed June 9, 1955 Date of Last Workover August 21, 1960
TD 3839' PSTD 5650' Producing Zone B-1 of Madison Formation
Latest Test _____

Justification for Workover:

To Increase Production.

Summary of Workover:

- 11-25-62 3650' PSTD
Moved in pulling unit to recalcify B-1 zone. Test tbg. with 3500#. Hold good. Pulled rods and tbg. Ran tbg. with Baker Model "R" packer. Shut down overnight.
- 11-27-62 3650' PSTD.
+ Set Model "R" pkr. at 3639'. Filled csg. and test head, tbg. and pkr. w/1500#. Hold good. Acidized B-1 zone 5640-48' w/3600 gals. Dowell retarded acid with MA X-2 J-203. Added mixed 1000 gals. lease crude w/100# admite. added and pump ahead of acid. Pump admite and oil at rate 3/4 BPM at 3500#. First 4 bbls. acid at rate of 1/2 BPM at 3500#. Formation broke, increased pump rate. Injected remainder of acid at rate of 4.5 BPM at 3200#. Bleed down press. 2200#. Let acid set 1 hr. on form. Started swabbing. Swab 3 hrs. Last hr. at the rate of 22 BPH 95-98% salt water w/ slight acid taste.
- 11-29-62 3650' PSTD.
Ran rods and spaced 2 1/8" x 2" conv. pump at 3650'. Started pumpg. at 11:00 A.M. Will test when well levels off.
- 11-30-62 5650' PSTD.
Pumpg. at the rate of 211 BPPD 100% wr.
- 12-1-62 5650' PSTD
Thru Pumping at the rate of 227 BPPD, 100% wr.
12-3-62
- 12-4-62 5650' PSTD.
Pumping started showing trace of oil.

12-5-62 5650' FBTD. Pumping.
3 hr. test pump. at rate of 325 BWPD - No oil. Speeded SWI from 12.5
SWI to 16 SWI.

12-6-62 5650' FBTD. Pumping 100% wr.

12-7-62 5650' FBTD. Pumping 100% wr.

12-8-62 5650' FBTD. Pumping. Testing.
Thru Wr. cut 97%. 12-8-62 - 4 hr. test pump. at rate of 293 BWPD, 96% wr.
12-10-62 6 BW, 247 SW. 12-10-62 - No test.

12-11-62 5650' FBTD. Pumping 96% wr.

12-12-62 5650' FBTD. Pumping 96% wr.

12-13-62 5650' FBTD. Pumping 97% wr.

12-14-62 5650' FBTD. Pumping at rate of 301 BWPD - 96% wr., (12 BW, 259 SW)
This is NO potential - To drop from report.

Recap of Workover:

1. Final Perforations: 5640'-5643' (Unchanged)
2. Final FBTD: 5650' (Unchanged)
3. Workover Potential: Pump 301 BWPD, 96% wr. (289 BWPD, 12 BWPD)
4. Geological name of Producing Zone: B-1 of Madison Formation (Unchanged)
5. Drilling Equipment: (Unchanged) 2 7/8" tubing @ 5336'
5450' 7/8" & 3/4" rods
2 1/2" x 1 1/2" x 16' pump

WORKOVERS #3

WFO NO. 14 --C. SE. SW. Section 3, T23N, R51E

11-27-62
This well was recompleted in the D1 zone (5640-42) in August 1962. Production leveled at 34 BPPD 67% water (238WPD 11BOPD). The D1 zone was acidized with 3000 gallons of retarded acid with Dowell fluid loss additive K-2. A spacerhead of 1009 Alomita mixed with lease crude was pumped ahead of the acid. On the workover potential test the well pumped at the rate of 298BOPD 95% water (15BOPD, 278WPD).

Schlumberger Well Log No. 4

Name and Well No. East Helena Unit Well No. 14
Field East Helena County Roosevelt State Montana
Well Location S 32 SE Section 3, T28N, R51E

Stratigraphic Correlation Present Job:

Date Completed June 9, 1955 Date of Last Workover November 26, 1962

TD 5333' FBTD 5650' Producing Zone B-1 of Madison Formation

Latest Test December 2, 1964, 97% water, 8 BOPD, 243 BWPD - Uneconomical

Justification for Workover:

77% Water - Uneconomical

Summary of Workover:

- 2-25-65 FBTD 5650' Prep. to plug off B-1 Zone and recompletes to Heath Sand, M.I.R.V. Pulling Unit. Pulled rods and tbg. out of hole. Closed well in overnight.
- 1-26-65 FBTD 5650' Ran Schlumberger Cement Bond Log from 5650' to 4400'. Top of cmt. at 4650'. Good bond through Heath Sand. Ran C.R. and Junk Basket on W.L. to 5650'. Ran Baker C.I. Model "K" Bridge Plug on W.L. to 4240'. Bridge Plug stuck in hole. Unable to work loose. Set plug and ran Baker Milling Tool on 2-7/8" tbg. to 2000'. Closed well in overnight.
- 2-27-65 FBTD 5650' Finished going in hole w/Baker 4-1/2" O.D. Mill. Rigged up Power Swivel and pump. Milled over Bridge Plug at 4240' and pushed same to bottom. Started out of hole. Shut down for rig repairs. Closed well in.
- 3-20-65 FBTD 5650' Finished repair on pulling unit. Pulled Baker 4-1/2" O.D. Mill. Shoe out of hole. Ran C.R. and Junk Basket on Schlumberger W.L. to 5650'. Ran Schuster C.I. Model 2-B Bridge Plug on W.L.. Set at 5350' w/1 sack of cement on top of plug w/camp bailer. Ran Model "B" Packer on 2-7/8" tbg.. Set packer at 4915'. Perforated w/Schlumberger through Tubing Magnet Gun 4945' to 4950', 2 holes per foot. Closed well in overnight.

3-1-65

PTD 4930' No pressure on tubing. Run swab. Swabbed tubing to 4911' (top of Model "R" Packer). Swabbed 2 hours. Swab test as follows:

1st hr.	Rate of 136 BFPD	100% Salt Water
2nd hr.	Rate of 134 BFPD	100% Salt Water
3rd hr.	Rate of 132 BFPD	100% Salt Water
4th hr.	Rate of 134 BFPD	100% Salt Water
5th hr.	Rate of 134 BFPD	100% Salt Water
6th hr.	Rate of 134 BFPD	100% Salt Water
7th hr.	Rate of 134 BFPD	100% Salt Water
8th hr.	Rate of 134 BFPD	100% Salt Water

Chlorides 38,000 PPM

Closed well in overnight

7:00 AM Tubing filled up overnight and will flow 1/2" stream

3-2-65

PSTD 4937' Pulled tubing. Set HOWCO C.I. Cmt. Retainer on W.L. at 4939'. Ran tbg. strung into retainer. Pressure casing to 1500#. Broke Formation at 2200#. Rate of 4-BPM. Squeeze Hauth Sand. Perforate 4945'-4950' w/ 50 sacks of Latex Cmt.. Spotted cmt. down tbg. Strung into retainer. Repressured casing to 1500#. Max. squeeze pressure 6400# w/40 sacks in formation. Pulled tbg. Closed well in overnight.

3-3-65

PSTD 4937' Ran Model "R" Packer. Perforate Hauth Sand with Schlumberger through Tubing Magnet Gun 4895'-4899', 2 holes per foot. Reset packer from 4780' to 4875'. Ran swab. Swab test as follows:

1st hr.	150 BFPD	99% Water Cut	1.5 BOPD	148.5 BFPD
2nd hr.	137 BFPD	99% Water Cut	1 BOPD	136 BFPD
3rd hr.	109 BFPD	100% Water Cut		
4th hr.	109 BFPD	100% Water Cut		
5th hr.	109 BFPD	100% Water Cut		

Closed well in overnight.

Tubing filled overnight. Did not flow, No oil on top of fluid.

3-4-65

PSTD 4937' Tested Packer Held OK. Released packer. Pulled out of hole laying down Workover Tubing. Redressed Model "R" Packer. Ran production tubing in hole to 4835'. Closed well in.

Temporarily Abandoned

Index of Workover:

Final Perforations: 4893' - 4893'

Final WOB: 4937'

Workover Potential: Temporarily Abandoned

Producing Zone: None

Results of Workover: TEMPORARILY ABANDONED

PRODUCTION &
INJECTION DATA

PLUGGING &
ABANDONMENT